CLAIMS

1. The use of an enterobacterium OmpA protein, or of a fragment thereof, for preparing a pharmaceutical composition intended for specific targeting of a biologically active substance which is associated with it to antigen-presenting cells, characterized in that said enterobacterium OmpA protein, or a fragment thereof, is internalized into the antigen-presenting cells.

2. The use as claimed in claim 1, characterized in that said enterobacterium OmpA protein, or a fragment thereof, binds specifically to antigen-presenting cells.

3. The use as claimed in either of claims 1 and 2, characterized in that said antigen-presenting cells are chosen from dendritic cells, monocytes and B lymphocytes.

4. The use as claimed in claim 3, characterized in that said antigen-presenting cells are dendritic cells.

5. The use as claimed in one of claims 1 to 4, characterized in that said enterobacterium OmpA protein, or a fragment thereof, is obtained from a culture of said enterobacterium, using an extraction process.

6. The use as claimed in one of claims 1 to 4, characterized in that said enterobacterium OmpA protein, or a fragment thereof, is obtained by recombinant process.

7. The use as claimed in one of claims 1 to 6, characterized in that said enterobacterium is Klebsiella *pneumoniae*.

8. The use as claimed in claim 7, characterized in that the amino acid sequence of said OmpA protein, or a fragment thereof, comprises:

a) the amino acid sequence having sequence SEQ ID No 2;

b) the amino acid sequence of a sequence having at least 80% homology with the sequence SEQ ID No 2; or

c) the amino acid sequence of a fragment, of at least 5 amino acids, of a sequence as defined in a) or b).

9. The use as claimed in one of claims 1 to 8, characterized in that said biologically active substance is chosen from peptides, lipopeptides, polysaccharides, oligosaccharides, nucleic acids, lipids and chemical substances.

10. The use as claimed in claim 9, characterized in that said biologically active substance is coupled by covalent attachment with said OmpA protein, or a fragment thereof.

11. The use as claimed in claim 10, characterized in that the coupling by covalent attachment is chemical coupling.

12. The use as claimed in claim 11, characterized in that one or more attachment elements is (are) introduced into said OmpA protein, or a fragment thereof, and/or into said biologically active substance, in order to facilitate the chemical coupling.

13. The use as claimed in claim 12, characterized in that said attachment element introduced is an amino acid.

14. The use as claimed in claim 10, characterized in that said biologically active substance coupled by covalent attachment with said OmpA protein, or a fragment thereof, is a recombinant chimeric protein resulting from the expression of a nucleic acid construct encoding said biologically active substance and said OmpA protein, or a fragment thereof.

15. The use as claimed in one of claims 10 to 14, characterized in that said biologically active substance is an antigen or a hapten.

16. The use as claimed in one of claims 1 to 15, for modifying the immune response against an antigen or a hapten.

17. The use as claimed in claim 16, for improving the immune response against an antigen or a hapten.

18. The use as claimed in one of claims 1 to 17, for preparing a pharmaceutical composition intended to prevent or to treat a disease with an active substance the effectiveness of which is modified by and/or linked to the internalization thereof by antigen-presenting cells.

19. The use as claimed in claim 18, for preparing a pharmaceutical composition intended to prevent or to treat a disease with an active substance, the effectiveness of which is modified by and/or linked to the internalization thereof by dendritic cells.

20. The use as claimed in either of claims 18 and 19, for preparing a pharmaceutical composition intended to prevent or to treat cancers, preferably cancers associated with a tumor antigen, autoimmune diseases, allergies, graft rejections, cardiovascular diseases, diseases of the central nervous system, inflammatory diseases, infectious diseases or diseases linked to an immunodeficiency.

21. The use as claimed in claim 20, for preparing a pharmaceutical vaccine composition intended to prevent or to treat an infectious disease or a cancer associated with a tumor antigen.

22. The use as claimed in one of claims 18 to 21, characterized in that said pharmaceutical composition also comprises an adjuvant of immunity.

23. The use as claimed in one of claims 18 to 22, characterized in that said pharmaceutical composition is vehicled in a form which makes it possible to improve the stability and/or immunogenicity thereof.

24. The use as claimed in claim 23, characterized in that said pharmaceutical composition is vehicled in the form of a liposome, of a viral vector or of a

transformed host cell capable of expressing a recombinant chimeric protein resulting from the expression of a nucleic acid construct encoding said biologically active substance and said OmpA protein, or a fragment thereof.

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